

# WEAVERS CONSULTING GROUP PTY LTD

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12 November 2020

Mr Stephen Sawtell  
Stephen Sawtell Consultants  
78 Fairview Road  
SAPPHIRE BEACH, NSW, 2450

Our ref: 20-201  
Your ref:

Dear Stephen,

## **Investigation of Traffic Related Matters Associated with Proposed Subdivision of 9 Gaudrons Road**

### **1 Background**

A proposed plan of subdivision has been submitted to Coffs Harbour City Council to subdivide Lot 11 DP 1141269 into 8 lots with an internal access road.

Coffs Harbour City Council has provided a list of road and access related issues to be addressed resulting from the TLC meeting notes of 17 June 2020. The matters include:

1. Upgrading of Gaudrons Road in accordance with the Coffs Harbour City Council Development Design Specification
2. Internal road requires a 20 m road reserve
3. Intersection sight distances to be verified
4. Concept stormwater management plan dealing with discharge to the motorway
5. Design of the access road intersection with Gaudrons Road and connection to the development lot to comply with Austroads Road Design specifications and Council specifications.

### **2 This Review**

In order to provide some certainty for the landowners, Mr and Mrs C & C Bowen this review proposes to address items 1, 2, 3 and 5 above plus other relevant matters to prove the acceptability of the proposal before proceeding to detailed design and other ancillary matters for a Development Application.

### **3 Site Inspection**

An inspection of the site was carried out on 30 October 2020. The weather was fine.



**Figure 1 - The site.**

#### **4 Traffic Generation**

From the RMS Technical Direction TDT 2013/04a, Guide to Traffic Generating Developments – Updated Traffic Surveys the traffic generation from Low Density Residential Dwellings in regional areas is:

- 7.4 trips per day per dwelling
- Weekday average evening peak hour vehicle trips 0.78
- Weekday average morning peak hour vehicle trips 0.71

The existing lot contains one dwelling and a commercial agricultural activities which would generate additional vehicle trips above that generated by a single dwelling. The increase in daily vehicle trips created by the subdivision will be due to the additional 7 lots less the existing trips generated by the commercial activities on the site.

Disregarding the existing commercial activities the increase in vehicle trips due to an additional 7 lots is:

- 52 trips per day
- Weekday average evening peak hour vehicle trips 5.5
- Weekday average morning peak hour vehicle trips 5.0

As the increase in peak hour traffic is only 5 trips it is obvious that a traffic count of the nearby roundabout would not be warranted to assess the capacity of the roundabout to accept the additional peak hour traffic loading.

## 5 Sight Distance Assessment

The existing access intersection with Gaudrons Road is proposed to be upgraded for design vehicle turning to and from Gaudrons Road.



**Figure 2 - Existing Access to Gaudrons Rd and Turning Movements**

Available sight distances at the access are as follows:

- The available sight distance to traffic exiting the roundabout is 105 m
- The available sight distance to traffic approaching from the west is 136 m
- The minimum Safe Intersection Sight Distance (SISD) for traffic approaching from the roundabout is 46 m with an approach speed of 30 km/h and reaction time of 1.5 seconds
- The roundabout exit speed is constrained by the radius of the traffic lanes and determined to be 30 km/h
- The approach speed from the west is the posted speed limit of 60 km/h. This gives a required SISD of 106 m which is 30 m less than the available sight distance

As Stopping Sight Distance is less than SISD this requirement is also satisfied.

A second measure of suitability is the time gap that a driver turning right out of the access into Gaudrons Road has to see an oncoming vehicle and consider that there is sufficient time to enter the traffic stream. This is the minimum gap sight distance and for this situation is 5 seconds to both approach directions.



The Critical Acceptance Gap has been determined from a statistical analysis of the random traffic stream passing a vehicle stopped at the intersection.

- For the eastbound approach the 15<sup>th</sup> percentile time was found to be 6.47 seconds and
- For the westbound approach the 15<sup>th</sup> percentile time was found to be 6.71 seconds.

The 15 percentile time is the number of seconds that 85% of the traffic stream will exceed

Therefore, the minimum Critical Acceptance Gap is exceeded and the proposed change of the existing property access to a road intersection satisfies sight distance requirements of Austroads and Council's specifications.

## **6 Upgrading of Gaudrons Road**

Upgrading of Gaudrons Road in accordance with the Coffs Harbour City Council Development Design Specification is the first point of the TLC notes.

At the intersection the existing traffic lanes are 3.1 m wide as defined with a centreline and E1 edge lines. Shoulder width exceeds the 1.0 m requirement of Council's specification.

As it can be assumed that 100% traffic assignment from the proposed intersection will be to and from the roundabout, then there is no requirement for upgrading of Gaudrons Road.

## **7 Internal Road Width**

The TLC notes noted that the internal road reserve width needed to be 20 m. This can be provided.

## **8 Other Matters**

It is noted that the existing access constructed from Gaudrons Road to Lot 11 currently has a minimum width of 4 m. It is acknowledged that the access will need to be upgraded to meet Council's Design Specification for geometry, pavement and services etc to be continuous with the internal road. The required alignment for the connection is currently being investigated in more detail.

This subdivision proposal should not need to be referred to TfNSW as it does not meet the threshold requirements of Schedule 3 of the Infrastructure SEPP.

## **9 Conclusion**

This investigation has proven that the existing point of access to Gaudrons Road for Lot 11 will be suitable for a future road connection to be provided to the proposed road within Lot 11 for an 8 lot subdivision.

The expected traffic generation from the subdivision will be very minor and further capacity analysis of the nearby roundabout on the western side of Pacific Highway should not be necessary.

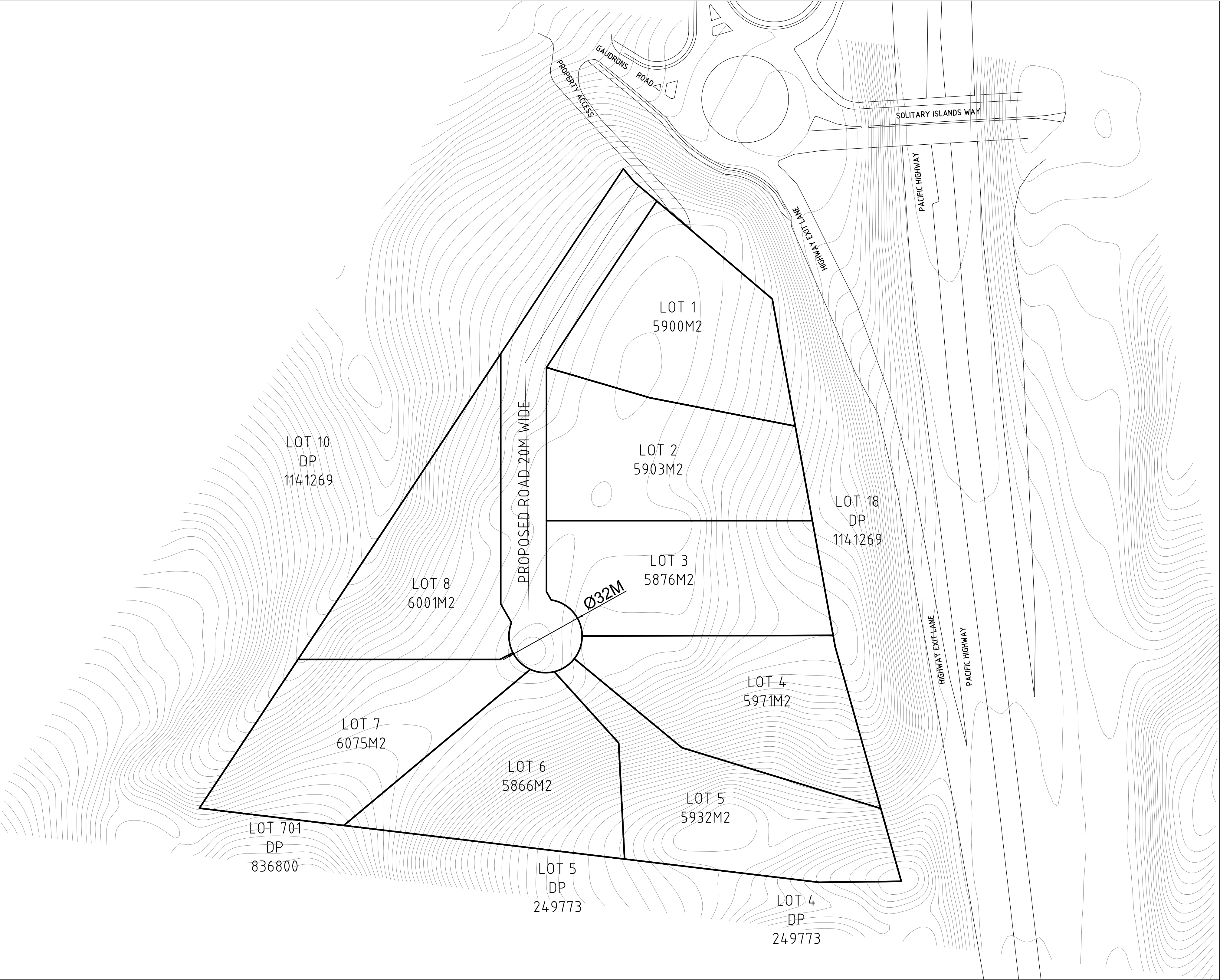
The above details are considered to be sufficient to prove "in principle" that satisfactory access can be provided to Gaudrons Road at the current access location subject to detailed design and provision for turning movements.

If any of these issues need clarification please contact me on 0432 016 490.

Yours sincerely



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PRELIMINARY

Rev.	Date	Revision Details	By	Ver.	App.



ENGINEERING  
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COFFS HARBOUR

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Client:  
CHRIS & CHRIS BOWEN

Project:  
LOT 11 DP1141269  
9 GAUDRONS ROAD  
SAPPHIRE BEACH

Drawn RWN	Signed RWN	Date 14/04/21
Designed	Signed	Date
Verified	Signed	Date
Approved	Signed	Date

Drawing Title:  
PLANNING PROPOSAL  
CONCEPT LOT LAYOUT

Project No. 205102
Scale 1 in 1000 (A1)
Drawing No. SK003
Rev.

